

# Elevation and Depression

G 4.5

Name \_\_\_\_\_

The phrase "angle of elevation" is an angle that is \_\_\_\_\_ from the

\_\_\_\_\_.

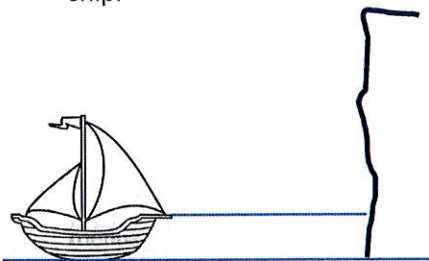
The phrase "angle of depression" is an angle that is \_\_\_\_\_ from the

\_\_\_\_\_.

For each problem, show at least: a diagram, the set up, one solving step, and the answer. Round all answers to a whole number.

- 1.) A ladder with its foot on a horizontal flat surface rests against a wall. Its angle of elevation is  $30^\circ$ . The foot of the ladder is 41 ft from the base of the wall. Find the height of the point where the ladder touches the wall.

- 2.) A man on the deck of a ship is 15 ft above sea level. He observes that the angle of elevation to the top of a cliff is  $70^\circ$  and the angle of depression to its base at sea level is  $50^\circ$ . Find the height of the cliff and its distance from the ship.



- 3.) From the top of a tower of height 115 meters, the angle of depression of a red car to the west is  $40^\circ$ . The angle of depression of a blue car to the east is  $55^\circ$ . Determine the distance between the two cars.